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NCIC HPV
Sent by: Mary-Beth Weaver

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cc:
cc:
Subject: Environmental Defense comments on Sec-Butyl Urea CAS# 689-11-2

Richard_Denison@environmentaldefense.org on 07/10/2003 02:54:48 PM

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Subject: Environmental Defense comments on Sec-Butyl Urea CAS# 689-11-2

(Submitted via Internet 7/10/03 to oppt.ncic@epa.gov, hpv.chemrtk@epa.gov, boswell.karen@epa.gov, chem.rtk@epa.gov, MTC@mchsi.com, and Edwin.L.Mongan-1@usa.dupont.com)

Environmental Defense appreciates this opportunity to submit comments on the robust summary/test plan for Sec-Butyl Urea CAS# 689-11-2.

E.I. duPont de Nemours & Co., in response to EPA's High Production Volume Challenge, has submitted a proposed Test Plan and Robust Summary for sec-butyl urea (SBU). The organization of this submission is confusing, in that what appears to be the Test Plan is labeled "Robust Summary," and the matrix indicating what data available and/or what testing is required is combined with what appear to be Robust Summaries of research studies. The "Robust Summary" is also poorly organized and difficult to follow.

According to the Robust Summary, SBU is deemed to be of low environmental concern based on modeled data for persistence, bioaccumulation and half-life. The claim that SBU is used as a closed-system intermediate, with minimal potential for release into the environment or human exposure, is cited as further evidence of low environmental concern. This claim is also used to argue that there is no need for repeated dose and developmental toxicity studies. The sponsor notes that SBU is shipped to one customer, although no details were provided to describe methods of shipping or subsequent use. In the absence of a convincing case to the contrary, we assume that any shipping and use is not consistent with closed-system intermediate status, as these activities clearly pose some risk of spills and environmental and human exposure (see Note 1 below).

For the above reasons, we believe measured data on Environmental Fate are needed, as well as data for Ecotoxicity and at least some of the SIDS elements listed under Mammalian Toxicity.

Our review of data submitted for SBU indicates that very few studies have been conducted to determine the environmental fate and toxicity of this chemical. In fact, some of the data listed as available and acceptable in the matrix of data available and/or testing required are not described in the Test Plan. For example, the matrix indicates data are available for each of the SIDS Environmental Fate elements, whereas our review of the Test Plan found no data were provided for Photodegradation or Stability in Water. Further, it appears that Fugacity and Biodegradation data are estimated from models supported by a minimum of data.

We are also concerned that most of the data for Ecotoxicity and Mammalian Toxicity are bridged or estimated from those developed for a related

chemical, isobutylidene diurea. The sponsor's stated justification for bridging data from isobutylidene diurea is based on what appears to be speculation that this chemical would be metabolized to 1-hydroxy isobutylurea which, according to the sponsor, is "a close structural analog of SBU". We do not doubt that mammals are capable of metabolizing some or all of a dose of SBU to 1-hydroxy isobutylurea, but evidence documenting this not been provided. Further, we do not believe that sharing a common metabolite is sufficient to support bridging data from isobutylidene diurea to predict toxicological parameters for SBU. That is, this likely common metabolite clearly differs from the parent compound, there is no assurance that 100% of the dose would be metabolized to this compound, and there is no assurance that toxicity associated with the parent compound would not be exerted prior to any metabolism. Moreover, 1-hydroxy isobutylurea is speculated by the sponsor only to be a common metabolite formed in mammals. There is no evidence or even speculation offered that fish, daphnia or aquatic plants form this metabolite or, if so, at what rate. Thus, we do not consider bridging data for any of the three SIDS elements listed under Ecotoxicity from data developed for isobutylidene diurea to be scientifically justified.

We agree with the sponsor that data presented for the alkylureas, methyl- and ethylurea, described in the "Robust Summary" indicate that these chemicals are not teratogens. We also believe it may be possible that these data can be bridged to predict that SBU would not be a teratogen. Unfortunately, summaries of these studies are not provided and, therefore, the quality of these studies cannot be judged. Unless they are provided and found to be of sufficient quality, they cannot be used support the proposed bridging.

Finally, no evidence is provided by the sponsor to support the claim that SBU is metabolized to 1-hydroxy isobutylurea across a range of does in the dam or in the developing fetus; thus we do not feel it is appropriate to bridge from data from developmental toxicity studies of isobutylidene diurea to predict results for SBU.

For the above reasons, we believe measured data on Environmental Fate are needed, as well as data for Ecotoxicity and some or all (see note 1 below) of the SIDS elements listed under Mammalian Toxicity.

Notes:
1. As mentioned above, the Robust Summary and Test Plan state that studies of Repeated Dose and Reproductive Toxicity are not required because SBU is manufactured and used in a closed system. We would defer to the EPA to determine if SBU qualifies for closed-system status and hence exemption from these studies.
2. We are not requesting additional acute toxicity studies, but point out that the data provided for Acute Toxicity are woefully inadequate.

In summary, we do not feel this Robust Summary/Test Plan is acceptable to meet the requirements of EPA's High Production Volume Challenge.

Thank you for this opportunity to comment.

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